

# Hospital Costs in Rhode Island (2002)

A State by State Comparison



Health Quality Performance Measurement

RHODE ISLAND DEPARTMENT OF HEALTH

***“HOSPITAL COSTS IN RHODE ISLAND (2002)”***

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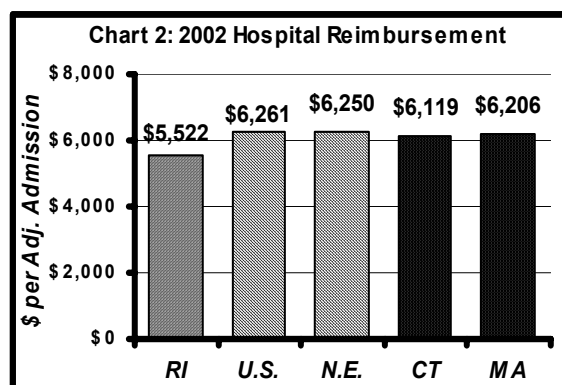
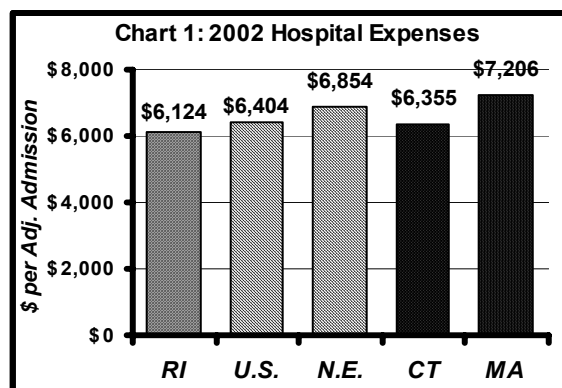
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## I. Executive Summary

\$0.32 of every healthcare dollar is spent on hospital services<sup>1</sup> so there is interest in monitoring and maximizing the value<sup>2</sup> of this investment. Hospital costs impact everyone and expensive hospital services can inflate insurance premiums. This could cause employers on the margin to drop health benefits or price individuals out of the market altogether. On the other hand, less expensive hospital services could provide a competitive advantage for RI businesses (all else being equal).

This Report updates a prior publication (1999) and presents the most current information (2002) on each state's hospital costs. It utilizes two national databases<sup>3</sup> to examine three separate cost measures (i.e., per-capita expenses, expenses per adjusted admission (Chart 1), and reimbursement per adjusted admission (Chart 2)). All comparisons control for the differences in each state's patient mix. Findings show:



### Regionally, in 2002:

- RI hospitals were the 2<sup>nd</sup> **least** expensive in New England<sup>4</sup>, and
- they received the **lowest** reimbursement in N.E..

### Nationally, in 2002:

- RI had the 18<sup>th</sup> **highest** per-capita hospital expenses (\$1,287) in the U.S., but
- the 19<sup>th</sup> **lowest** expenses per unit-of-service (\$6,124).
- Reconciling the high per-capita and low unit expenses in RI, was the 4<sup>th</sup> **highest** outpatient surgical rate (99 per 1,000), and the 12<sup>th</sup> **highest** ER use rate in the Country (438 per 1,000).
- On the revenue side, RI hospitals received the 8<sup>th</sup> **lowest** reimbursement per unit-of-service (\$5,522).
- From 1999 to 2002, hospital unit-expenses in RI increased the 19<sup>th</sup> **fastest** in the Nation (+18%), and
- unit-reimbursement increased the 21<sup>st</sup> **fastest** in the U.S. (+19%).

## II. Introduction/Per-Capita Expenses

Promoting the competitiveness of hospital care in RI requires it be consistently delivered less expensively with the same or better quality than elsewhere. This Report compares each state's hospital costs, it does not examine the quality<sup>5</sup> nor the appropriateness<sup>6</sup> of hospital services.

Three different types of hospital costs are evaluated here. **Per-capita expenses** are the total hospital expenses in a state reported on a per person basis. **Unit-expenses** are the costs incurred by hospitals from providing one unit of healthcare service. **Unit-reimbursement** is the cost to the payors (commercial, governmental and private) for purchasing one unit of these services.

The adjusted admission<sup>7</sup> is the preferred unit-of-service for examining unit-costs because it accounts for all of the activity at the hospital, both inpatient and outpatient. Further, all of these cost measures are reported on a Medicare case-mix adjusted basis. This allows for a more valid comparison of actual costs by controlling for differences in the complexity (and resource use) of each state's patient mix.<sup>8</sup>

Table I presents each state's 2002 per-capita hospital expenses. RI had the 18<sup>th</sup> **highest** per-capita expenses (\$1,287) in the country, 9% greater than the U.S. rate (\$1,181).<sup>9</sup> RI also ranked as the 3<sup>rd</sup> **highest** state in New England, behind Massachusetts (\$1,587) and Maine (\$1,380).

Evaluating a relatively high per-capita expense necessarily involves an examination of both the costs of hospital services and the appropriateness of hospital utilization. A high per-capita expense is less onerous if based on greater (appropriate) utilization than on higher costs (i.e., unit-expenses).<sup>10</sup>

1: PER-CAPITA EXPENSES <sup>1</sup>		
	Amount	Rank
North Dakota	\$1,993	1
Massachusetts	\$1,587	2
South Dakota	\$1,539	3
New York	\$1,517	4
Missouri	\$1,515	5
Minnesota	\$1,461	6
Iowa	\$1,430	7
Mississippi	\$1,399	8
Montana	\$1,390	9
Maine	\$1,380	10
Nebraska	\$1,345	11
Pennsylvania	\$1,328	12
Louisiana	\$1,323	13
Kentucky	\$1,317	14
West Virginia	\$1,316	15
Alaska	\$1,305	16
Ohio	\$1,300	17
Rhode Island	\$1,287	18
North Carolina	\$1,270	19
Illinois	\$1,260	20
Wisconsin	\$1,235	21
Indiana	\$1,233	22
Tennessee	\$1,211	23
South Carolina	\$1,206	24
Michigan	\$1,190	25
Arkansas	\$1,187	26
New Jersey	\$1,181	27
New Hampshire	\$1,126	28
Wyoming	\$1,125	29
Connecticut	\$1,109	30
Delaware	\$1,107	31
Vermont	\$1,089	32
Texas	\$1,087	33
Oklahoma	\$1,076	34
Kansas	\$1,065	35
Oregon	\$1,038	36
Colorado	\$1,035	37
Alabama	\$1,029	38
Nevada	\$1,021	39
Florida	\$1,016	40
New Mexico	\$1,008	41
Georgia	\$998	42
Idaho	\$993	43
Hawaii	\$970	44
Maryland	\$969	45
Washington	\$967	46
Utah	\$966	47
Virginia	\$950	48
California	\$918	49
Arizona	\$815	50
New England	\$1,381	
United States	\$1,181	

<sup>1</sup> 2002 data, Medicare case-mix adjusted hospital expenses per person

### III. Hospital Unit-Expenses

<b>2: UNIT-EXPENSES<sup>1</sup></b>		
	<b>Amount</b>	<b>Rank</b>
Alaska	\$10,441	1
New York	\$8,002	2
Nevada	\$7,689	3
Minnesota	\$7,630	4
South Dakota	\$7,538	5
Massachusetts	\$7,206	6
North Dakota	\$7,136	7
Idaho	\$7,132	8
Hawaii	\$6,932	9
Colorado	\$6,918	10
New Jersey	\$6,912	11
Maine	\$6,889	12
Nebraska	\$6,885	13
California	\$6,777	14
North Carolina	\$6,695	15
Utah	\$6,692	16
Montana	\$6,664	17
Missouri	\$6,583	18
Wisconsin	\$6,501	19
Wyoming	\$6,357	20
Connecticut	\$6,355	21
South Carolina	\$6,342	22
Iowa	\$6,293	23
Washington	\$6,278	24
Oregon	\$6,240	25
Illinois	\$6,236	26
Indiana	\$6,232	27
Texas	\$6,228	28
Vermont	\$6,183	29
Delaware	\$6,163	30
New Mexico	\$6,128	31
Rhode Island	\$6,124	32
Mississippi	\$6,094	33
New Hampshire	\$5,903	34
Georgia	\$5,887	35
Michigan	\$5,885	36
Ohio	\$5,885	37
Pennsylvania	\$5,872	38
Virginia	\$5,820	39
Oklahoma	\$5,654	40
Louisiana	\$5,650	41
Maryland	\$5,581	42
Tennessee	\$5,475	43
Kentucky	\$5,468	44
Kansas	\$5,414	45
Arkansas	\$5,318	46
Arizona	\$5,221	47
Florida	\$5,000	48
West Virginia	\$4,626	49
Alabama	\$4,622	50
New England	\$6,854	
United States	\$6,404	

Table 2 examines 2002 hospital unit-expenses (i.e., the expenses hospitals incur per adjusted admission). Unlike per-capita expenses, which are a function of both the cost of producing services<sup>11</sup> (i.e., unit-expenses) and the number of services provided (i.e., utilization), unit-expenses reflect only real cost differences.

Generally, hospitals have considerable control over their expenses. With the exception of some fixed costs (e.g., depreciation, interest, utilities, etc.), most others are either variable or semi-fixed, and may be changed according to demand (i.e., flexed to patient volume).

In 2002, RI hospitals incurred \$6,124 in expenses per adjusted admission. This amount ranked 32<sup>nd</sup> in the country (the 19<sup>th</sup> **lowest** of all states), and 4% **less** than the national rate (\$6,404). RI was also 11% **less** than the New England rate (\$6,854), and the 2<sup>nd</sup> **least** expensive state in the region (above only New Hampshire at \$5,903).

Relatively low unit-expenses indicate greater hospital efficiency and are favorable from an operational standpoint. They provide a hospital more flexibility in reimbursement negotiations that could result in lower prices. Consumers could benefit to the extent these lower prices are reflected in lower insurance premiums.

<sup>1</sup> 2002 data, Medicare case-mix adjusted hospital expenses per adjusted admission

## ***IV. Hospital Utilization***

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Reconciling RI's relatively high per-capita expenses with the low unit-expenses suggests there was some greater hospital utilization here than elsewhere. Table 3 supports this explanation and provides comparative utilization rates for select inpatient and outpatient services. Hospital inpatient utilization in RI was low compared to national rates but outpatient utilization, specifically outpatient surgeries and ER visits, exceeded the national rates. These are the services that drove the relatively high per-capita hospital expenses in the state.

RI's **inpatient admission** rate (115 per 1,000) ranked 31<sup>st</sup> in the country (the 20<sup>th</sup> **lowest**), and 4% below the national rate (120 per 1,000). RI's rate was also 3% **above** the New England rate (112 per 1,000), and the 2<sup>nd</sup> highest in the region (behind only Massachusetts at 119 per 1,000).

RI's **inpatient day** rate (607 per 1,000) ranked 35<sup>th</sup> in the U.S. (the 16<sup>th</sup> **lowest**), and 11% **below** the national rate (682 per 1,000). RI's rate was also 6% **below** the New England rate (645 per 1,000), and ranked near the middle of all N.E. states.

RI's **Outpatient hospital utilization** was another story. RI's **ER** rate (438 per 1,000) ranked 12<sup>th</sup> in the country, and 15% **greater** than the national rate (381 per 1,000). RI's rate was similar to the regional rate (441 per 1,000) and ranked near the middle of all NE states.

RI's **outpatient visit** rate (1,630 per 1,000) ranked 27<sup>th</sup> in the country, and 5% **greater** than the national rate (1,548 per 1,000). RI's rate was 23% **lower** than the New England rate (2,112 per 1,000), and the 2<sup>nd</sup> lowest of all N.E. states (above only Connecticut at 1,517 per 1,000).

RI's **outpatient surgical** rate (99 per 1,000) ranked 4<sup>th</sup> in the U.S. (61 per 1,000), and 62% **greater** than the national rate (61 per 1,000). RI's rate was also 39% **higher** than the regional rate (71 per 1,000) and the highest in New England.

Assessing RI's relatively high hospital outpatient surgical and ER use rates cannot be done without a determination of whether this utilization was appropriate<sup>12</sup> and whether less expensive alternative facilities of the same quality were available.



3: 2002 HOSPITAL UTILIZATION RATES (per 1,000 Population)										
INPATIENT SERVICES					OUTPATIENT SERVICES					
	Admis- sions <sup>1</sup>	Rank	Inpatient Days <sup>1</sup>	Rank	Emergency Visits <sup>1</sup>	Rank	Outpatient Visits <sup>1</sup>	Rank	Outpatient Surgeries <sup>1</sup>	Rank
Alabama	151	3	723	19	482	7	1,757	20	71	15
Alaska	74	50	466	46	396	23	1,682	26	55	36
Arizona	108	34	466	45	286	48	656	50	38	49
Arkansas	142	9	779	14	452	9	1,334	34	59	30
California	98	40	529	40	288	47	1,231	40	38	50
Colorado	95	43	482	44	333	39	1,223	41	41	47
Connecticut	109	33	647	32	402	18	1,517	29	55	35
Delaware	116	30	676	27	379	26	2,034	11	83	6
Florida	139	10	736	18	396	21	949	46	55	37
Georgia	103	36	675	28	377	28	1,081	44	60	28
Hawaii	90	46	696	23	250	50	1,328	36	42	46
Idaho	92	45	484	43	332	40	1,449	32	45	44
Illinois	128	15	661	31	373	30	1,731	23	59	29
Indiana	116	27	662	30	396	22	1,892	16	68	21
Iowa	126	18	834	10	365	32	2,812	1	103	3
Kansas	121	20	797	13	346	35	1,743	21	57	31
Kentucky	147	5	829	12	515	5	1,597	28	89	5
Louisiana	154	2	864	8	551	2	1,843	18	64	24
Maine	113	32	687	24	548	3	2,335	6	75	11
Maryland	116	25	559	39	356	34	828	49	64	26
Massachusetts	119	23	677	26	449	11	2,511	5	76	10
Michigan	116	29	627	33	401	19	2,173	9	74	12
Minnesota	119	21	829	11	320	41	1,454	31	56	34
Mississippi	145	7	956	7	542	4	850	47	53	39
Missouri	143	8	747	16	437	14	2,191	8	69	17
Montana	117	24	1,179	3	304	44	2,619	2	43	45
Nebraska	119	22	997	4	296	45	1,710	24	77	8
Nevada	97	41	511	41	288	46	845	48	40	48
New Hampshire	93	44	507	42	432	15	1,939	15	67	23
New Jersey	127	17	721	20	342	37	1,508	30	49	42
New Mexico	97	42	458	47	380	25	1,877	17	56	33
New York	129	14	960	6	390	24	2,051	10	72	13
North Carolina	116	28	713	21	399	20	1,262	38	62	27
North Dakota	149	4	1,333	1	465	8	2,557	3	76	9
Ohio	129	13	671	29	449	10	2,034	12	71	16
Oklahoma	128	16	679	25	370	31	1,005	45	50	41
Oregon	98	39	429	48	317	43	2,005	14	54	38
Pennsylvania	146	6	838	9	410	17	2,217	7	80	7
Rhode Island	115	31	607	35	438	12	1,630	27	99	4
South Carolina	125	19	710	22	438	13	1,331	35	68	19
South Dakota	132	12	1,316	2	273	49	1,703	25	206	1
Tennessee	138	11	772	15	486	6	1,231	39	68	22
Texas	116	26	606	36	379	27	1,160	42	50	40
Utah	89	47	378	50	345	36	1,734	22	68	20
Vermont	85	49	565	38	374	29	2,011	13	64	25
Virginia	102	37	587	37	357	33	1,122	43	69	18
Washington	85	48	410	49	319	42	1,287	37	46	43
West Virginia	164	1	986	5	611	1	2,545	4	112	2
Wisconsin	107	35	624	34	337	38	1,797	19	72	14
Wyoming	99	38	742	17	427	16	1,356	33	57	32
New England	112		645		441		2,112		71	
United States	120		682		381		1,548		61	

<sup>1</sup> Source: *Hospital Statistics*, 2004 Ed., American Hospital Association



## V. Hospital Unit-Reimbursement

Table 4 presents 2002 hospital unit-reimbursement, or what payors (third parties and patients) actually paid for hospital care. Generally, hospitals have less control over their reimbursement than their expenses. Reimbursement is a more complex interaction of each hospital's expense structure, payor mix, market share and negotiating skills.

RI hospitals' reimbursement of \$5,522 per adjusted admission, ranked 43<sup>rd</sup> in the country (the 8<sup>th</sup> **lowest**), and 12% **less** than the national rate (\$6,261). RI also had the **lowest** unit-reimbursement in N.E., 12% **below** the regional amount (\$6,250).

RI's 2002 reimbursement was -\$602 less than its expenses per unit-of-service. This was the 5<sup>th</sup> largest shortfall in the country (above only Massachusetts -\$1,000, Alaska -\$788, New York -\$773, and Hawaii -\$629).

Given this unenviable position, however, one cannot conclude that hospitals lost money from operations<sup>13</sup> that year because unit-expenses exceeded unit-reimbursement statewide. Not included in the profitability equation were other sources of hospital operating revenue (e.g., investment income, fundraising, and other operating funds).

4: UNIT-REIMBURSEMENT <sup>1</sup>		
	Amount	Rank
Alaska	\$9,654	1
Nevada	\$8,157	2
Minnesota	\$7,600	3
South Dakota	\$7,463	4
Colorado	\$7,325	5
New York	\$7,229	6
Idaho	\$7,091	7
North Dakota	\$7,089	8
Nebraska	\$7,072	9
Utah	\$6,876	10
Maine	\$6,870	11
New Jersey	\$6,701	12
North Carolina	\$6,631	13
Montana	\$6,620	14
Wisconsin	\$6,539	15
California	\$6,534	16
South Carolina	\$6,465	17
Missouri	\$6,445	18
Indiana	\$6,436	19
Oregon	\$6,342	20
Mississippi	\$6,309	21
Hawaii	\$6,303	22
Texas	\$6,230	23
Wyoming	\$6,214	24
Massachusetts	\$6,206	25
Connecticut	\$6,119	26
Washington	\$6,106	27
Vermont	\$6,104	28
Iowa	\$6,039	29
Illinois	\$5,946	30
New Hampshire	\$5,923	31
New Mexico	\$5,920	32
Georgia	\$5,886	33
Virginia	\$5,819	34
Delaware	\$5,810	35
Pennsylvania	\$5,788	36
Ohio	\$5,740	37
Michigan	\$5,714	38
Oklahoma	\$5,710	39
Louisiana	\$5,692	40
Tennessee	\$5,556	41
Kentucky	\$5,536	42
Rhode Island	\$5,522	43
Maryland	\$5,466	44
Arkansas	\$5,453	45
Kansas	\$5,377	46
Arizona	\$5,307	47
Florida	\$5,014	48
Alabama	\$4,742	49
West Virginia	\$4,579	50
New England	\$6,250	
United States	\$6,261	

<sup>1</sup> 2002 Medicare case-mix adjusted hospital reimbursement per adjusted admission

## ***VI. Hospital Cost Trends***

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Table 5 compares 1999 and 2002 hospital expenses and reimbursement. For this period, RI's hospital unit-expenses **increased** 18%, the 19<sup>th</sup> **largest** change in the country (+20%). The New England rate of increase was 14%, and only Maine (+24%) and New Hampshire (+20%) rose more than RI. Notwithstanding RI's 18% increase in unit-expenses, its national ranking remained fairly consistent. RI ranked 34<sup>th</sup> in 1999, versus 32<sup>nd</sup> in 2002. Regionally, RI was the 2<sup>nd</sup> least expensive N.E. state both years.

On the revenue side, RI's unit-reimbursement **increased** 19%, the 21<sup>st</sup> **largest** change in the country (+21%). Regionally, unit-reimbursement **increased** 16% and Maine (+23%) was the only New England state to exceed RI. To put this into context, however, RI ranked 42<sup>nd</sup> in 1999, versus 43<sup>rd</sup> in 2002. Regionally, RI was the lowest reimbursed state in N.E. both years.

From a financial standpoint, this situation is relatively favorable to the hospitals. To have reimbursement increase at a faster pace than expenses (albeit by a tiny margin) is certainly preferable to the alternative.

Table 5 also illustrates the relationship between expenses and reimbursement. Four of the five highest reimbursed states (i.e., Alaska, Nevada, Minnesota, and South Dakota) were also among the top five most expensive. Likewise, four of the five lowest reimbursed states (i.e., West Virginia, Alabama, Florida, and Arizona) were among the five least expensive. This association is not coincidental. It is in the economic self-interest of hospitals to maximize reimbursement (while minimizing expenses). At the same time, payors are indisposed to reimburse hospitals much above the cost (i.e., expense) of providing services. To the extent that no one provider or payor exercises undue control over the marketplace, this healthy balance prevails.

5: 1998-2002 HOSPITAL COSTS CHANGES							
UNIT-EXPENSES				UNIT-REIMBURSEMENT			
	1999 <sup>1</sup>	2002	% Change Rank		1999 <sup>1</sup>	2002	% Change Rank
Nevada	\$4,220	\$7,689	82% 1	Nevada	\$4,345	\$8,157	88% 1
Idaho	\$4,566	\$7,132	56% 2	Idaho	\$4,656	\$7,091	52% 2
Utah	\$4,577	\$6,692	46% 3	Utah	\$4,783	\$6,876	44% 3
Wyoming	\$4,864	\$6,357	31% 4	Colorado	\$5,227	\$7,325	40% 4
Colorado	\$5,355	\$6,918	29% 5	New Jersey	\$5,010	\$6,701	34% 5
New Jersey	\$5,366	\$6,912	29% 6	Oregon	\$4,884	\$6,342	30% 6
North Carolina	\$5,286	\$6,695	27% 7	Texas	\$4,890	\$6,230	27% 7
South Dakota	\$5,978	\$7,538	26% 8	North Carolina	\$5,262	\$6,631	26% 8
Oregon	\$4,993	\$6,240	25% 9	Mississippi	\$5,054	\$6,309	25% 9
Maine	\$5,535	\$6,889	24% 10	Minnesota	\$6,095	\$7,600	25% 10
Minnesota	\$6,160	\$7,630	24% 11	South Dakota	\$6,013	\$7,463	24% 11
Alaska	\$8,432	\$10,441	24% 12	Oklahoma	\$4,609	\$5,710	24% 12
Virginia	\$4,740	\$5,820	23% 13	Maine	\$5,584	\$6,870	23% 13
Mississippi	\$4,980	\$6,094	22% 14	Wyoming	\$5,064	\$6,214	23% 14
Louisiana	\$4,662	\$5,650	21% 15	California	\$5,341	\$6,534	22% 15
Texas	\$5,200	\$6,228	20% 16	Missouri	\$5,293	\$6,445	22% 16
New Hampshire	\$4,939	\$5,903	20% 17	Kentucky	\$4,594	\$5,536	20% 17
Oklahoma	\$4,742	\$5,654	19% 18	Arizona	\$4,404	\$5,307	20% 18
Rhode Island	\$5,169	\$6,124	18% 19	Indiana	\$5,381	\$6,436	20% 19
California	\$5,726	\$6,777	18% 20	Arkansas	\$4,585	\$5,453	19% 20
Missouri	\$5,582	\$6,583	18% 21	Rhode Island	\$4,654	\$5,522	19% 21
Iowa	\$5,341	\$6,293	18% 22	Massachusetts	\$5,241	\$6,206	18% 22
Florida	\$4,252	\$5,000	18% 23	New York	\$6,118	\$7,229	18% 23
Kentucky	\$4,662	\$5,468	17% 24	Montana	\$5,644	\$6,620	17% 24
Montana	\$5,729	\$6,664	16% 25	Illinois	\$5,089	\$5,946	17% 25
New York	\$6,887	\$8,002	16% 26	South Carolina	\$5,538	\$6,465	17% 26
Indiana	\$5,373	\$6,232	16% 27	Florida	\$4,307	\$5,014	16% 27
Massachusetts	\$6,251	\$7,206	15% 28	Iowa	\$5,190	\$6,039	16% 28
South Carolina	\$5,506	\$6,342	15% 29	New Hampshire	\$5,104	\$5,923	16% 29
Washington	\$5,463	\$6,278	15% 30	Wisconsin	\$5,637	\$6,539	16% 30
Arkansas	\$4,646	\$5,318	14% 31	Ohio	\$4,982	\$5,740	15% 31
Wisconsin	\$5,688	\$6,501	14% 32	Virginia	\$5,053	\$5,819	15% 32
Illinois	\$5,488	\$6,236	14% 33	Pennsylvania	\$5,039	\$5,788	15% 33
Ohio	\$5,211	\$5,885	13% 34	Washington	\$5,323	\$6,106	15% 34
Arizona	\$4,625	\$5,221	13% 35	North Dakota	\$6,229	\$7,089	14% 35
Pennsylvania	\$5,285	\$5,872	11% 36	Delaware	\$5,155	\$5,810	13% 36
North Dakota	\$6,432	\$7,136	11% 37	Louisiana	\$5,052	\$5,692	13% 37
Delaware	\$5,575	\$6,163	11% 38	Tennessee	\$4,997	\$5,556	11% 38
Georgia	\$5,363	\$5,887	10% 39	Alaska	\$8,761	\$9,654	10% 39
Vermont	\$5,724	\$6,183	8% 40	Georgia	\$5,370	\$5,886	10% 40
Maryland	\$5,208	\$5,581	7% 41	Vermont	\$5,590	\$6,104	9% 41
Hawaii	\$6,494	\$6,932	7% 42	Alabama	\$4,367	\$4,742	9% 42
Nebraska	\$6,503	\$6,885	6% 43	Maryland	\$5,042	\$5,466	8% 43
Michigan	\$5,574	\$5,885	6% 44	Connecticut	\$5,663	\$6,119	8% 44
Connecticut	\$6,024	\$6,355	5% 45	Nebraska	\$6,612	\$7,072	7% 45
West Virginia	\$4,438	\$4,626	4% 46	Michigan	\$5,363	\$5,714	7% 46
Tennessee	\$5,257	\$5,475	4% 47	Hawaii	\$6,022	\$6,303	5% 47
Alabama	\$4,534	\$4,622	2% 48	West Virginia	\$4,391	\$4,579	4% 48
New Mexico	\$6,052	\$6,128	1% 49	Kansas	\$5,455	\$5,377	-1% 49
Kansas	\$5,483	\$5,414	-1% 50	New Mexico	\$6,209	\$5,920	-5% 50
New England	\$6,033	\$6,854	14%	New England	\$5,401	\$6,250	16%
United States	\$5,318	\$6,404	20%	United States	\$5,165	\$6,261	21%

<sup>1</sup> Source: *1999 Hospital Costs in Rhode Island*, Cryan B., HEALTH, Oct. 2001

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- <sup>1</sup> 2002 hospital expenditures were 32% of national healthcare expenditures, US Census Bureau, ([www.census.gov/prod/www/statistical.abstract-02.html](http://www.census.gov/prod/www/statistical.abstract-02.html))
  - <sup>2</sup> 'Value' is a function of both cost and quality. This Report examines only hospital costs (see footnote<sup>5</sup> for information on hospital quality).
  - <sup>3</sup> Hospital Statistics (2004 Ed.), American Hospital Association; Almanac of Hospital Financial and Operating Indicators (2004 Ed.), Ingenix
  - <sup>4</sup> Only New Hampshire had lower unit-expenses than RI in 2002 (\$5,903)
  - <sup>5</sup> HEALTH's Office of Performance Measurement reports on 3 select measures of hospital quality (i.e., heart attack care, heart failure care and pneumonia care, [www.health.ri.gov](http://www.health.ri.gov))
  - <sup>6</sup> Utilization review is the process by which healthcare services are evaluated for medical appropriateness (UR Agents are regulated by HEALTH's Office of Managed Care Regulation)
  - <sup>7</sup> An Adjusted Admission approximates both the inpatient and outpatient activity at a hospital (admissions x (total gross patient revenue / gross inpatient revenue)).
  - <sup>8</sup> (Statistic / Medicare case-mix index); "Although it is specifically relevant to Medicare patients, the Medicare case-mix index is a good approximation of the complexity (and cost) of the provider's entire patient mix." Financial and Clinical Benchmarking: The Strategic Use of Data, HCIA Sacks and Healthcare Financial Management Association, 1997, p64
  - <sup>9</sup> RI's per-capita hospital expenses in 2002 and 1999 were relatively similar (18<sup>th</sup> highest in US in 2002 versus 16<sup>th</sup> highest in 1999, 9% higher than US rate in 2002 versus 8% higher in 1999, and the 3<sup>rd</sup> highest state in NE both years).
  - <sup>10</sup> This appears to be the case in RI, as utilization of certain hospital services was high (Table 3) while hospital unit-expenses were favorably low (Table 2)
  - <sup>11</sup> Included in the AHA's expenses are all hospital expenses for the period, including non-operating expenses (but excluding bad debt). Therefore, the unit-expense calculations include some expenses not related to the delivery of patient services.
  - <sup>12</sup> RI's 2000 elderly population was the 6<sup>th</sup> highest in the country (14.5% age 65+, [www.census.gov](http://www.census.gov)), suggesting this could be a factor in RI's relatively high hospital outpatient utilization.
  - <sup>13</sup> 6 of RI's 13 hospitals posted operating profits in 2002, although on an aggregate basis, there was a -\$5m operating loss statewide; 2003 Hospital Financial Dataset, HEALTH, Cryan, B., May '04

APPENDIX: 2002 DATA INPUTS <sup>1</sup>								
	-1-  Admissions	-2- Total Gross Patient Revenue (millions)	-3- Gross Inpatient Revenue (millions)	-4- Total (Adj.) Admissions (1*(2/3)	-5- Population (thousands)	-6- Net Patient Revenue (millions)	-7- Total Expenses (millions)	-8- Medicare Case-Mix Index <sup>2</sup>
Alabama	676,337	\$16,112	\$10,909	998,913	4,487	\$5,917	\$5,767	1.2491
Alaska	47,560	\$1,627	\$961	80,509	644	\$872	\$943	1.1213
Arizona	591,094	\$15,597	\$10,827	851,555	5,456	\$5,740	\$5,648	1.2702
Arkansas	383,509	\$8,624	\$5,484	603,057	2,701	\$3,704	\$3,612	1.1263
California	3,430,241	\$123,569	\$89,111	4,756,656	35,116	\$40,980	\$42,505	1.3186
Colorado	426,560	\$13,433	\$8,494	674,573	4,507	\$5,795	\$5,472	1.1727
Connecticut	375,686	\$9,738	\$6,057	603,928	3,461	\$5,049	\$5,243	1.3662
Delaware	93,275	\$1,954	\$1,257	144,999	807	\$1,133	\$1,202	1.3449
Florida	2,315,230	\$67,648	\$46,106	3,396,962	16,713	\$23,262	\$23,194	1.3657
Georgia	885,142	\$23,686	\$14,446	1,451,338	8,560	\$10,574	\$10,576	1.2378
Hawaii	111,498	\$3,265	\$2,090	174,212	1,245	\$1,492	\$1,641	1.3584
Idaho	123,046	\$2,564	\$1,689	186,798	1,341	\$1,479	\$1,488	1.1169
Illinois	1,615,269	\$43,703	\$27,723	2,546,373	12,601	\$18,686	\$19,598	1.2342
Indiana	715,936	\$18,210	\$10,701	1,218,293	6,159	\$9,577	\$9,273	1.2214
Iowa	370,968	\$7,636	\$4,246	667,218	2,937	\$4,302	\$4,484	1.0678
Kansas	328,987	\$7,859	\$4,838	534,414	2,716	\$3,552	\$3,576	1.2360
Kentucky	601,644	\$14,222	\$8,678	986,033	4,093	\$6,278	\$6,201	1.1502
Louisiana	692,011	\$16,203	\$10,680	1,049,943	4,483	\$6,802	\$6,752	1.1382
Maine	145,917	\$3,588	\$2,020	259,186	1,294	\$2,099	\$2,105	1.1790
Maryland	634,914	\$9,425	\$6,315	947,690	5,458	\$6,827	\$6,972	1.3181
Massachusetts	765,820	\$23,936	\$12,947	1,415,814	6,428	\$11,179	\$12,980	1.2723
Michigan	1,163,157	\$31,570	\$18,068	2,032,382	10,050	\$14,876	\$15,321	1.2809
Minnesota	598,852	\$16,218	\$10,101	961,506	5,020	\$7,853	\$7,884	1.0746
Mississippi	416,815	\$9,022	\$5,702	659,521	2,872	\$4,045	\$3,907	0.9721
Missouri	809,355	\$22,077	\$13,686	1,305,533	5,673	\$9,544	\$9,748	1.1342
Montana	106,758	\$2,125	\$1,197	189,579	909	\$1,320	\$1,329	1.0516
Nebraska	206,208	\$5,601	\$3,420	337,685	1,729	\$2,971	\$2,893	1.2441
Nevada	211,657	\$7,067	\$5,183	288,589	2,173	\$2,394	\$2,257	1.0171
New Hampshire	117,996	\$3,362	\$1,632	243,144	1,275	\$1,837	\$1,830	1.2754
New Jersey	1,094,781	\$39,939	\$29,789	1,467,799	8,590	\$12,450	\$12,842	1.2658
New Mexico	180,041	\$4,509	\$2,660	305,183	1,855	\$2,057	\$2,130	1.1387
New York	2,463,447	\$70,502	\$47,823	3,631,713	19,158	\$33,021	\$36,550	1.2577
North Carolina	966,722	\$22,172	\$13,580	1,578,357	8,320	\$11,453	\$11,564	1.0943
North Dakota	94,630	\$2,437	\$1,302	177,082	634	\$1,343	\$1,352	1.0697
Ohio	1,475,630	\$39,504	\$23,113	2,522,139	11,421	\$18,663	\$19,132	1.2890
Oklahoma	445,952	\$9,482	\$6,358	665,039	3,494	\$4,026	\$3,986	1.0602
Oregon	345,193	\$7,747	\$4,564	585,979	3,522	\$4,541	\$4,469	1.2221
Pennsylvania	1,798,243	\$57,237	\$36,887	2,790,284	12,335	\$20,374	\$20,670	1.2615
Rhode Island	122,741	\$3,580	\$1,955	224,846	1,070	\$1,615	\$1,791	1.3009
South Carolina	513,136	\$13,909	\$9,137	781,135	4,107	\$5,943	\$5,830	1.1768
South Dakota	100,141	\$1,956	\$1,261	155,329	761	\$1,183	\$1,195	1.0208
Tennessee	797,318	\$19,216	\$11,948	1,282,359	5,797	\$8,511	\$8,387	1.1945
Texas	2,533,821	\$73,473	\$48,954	3,802,872	21,780	\$28,468	\$28,458	1.2016
Utah	206,344	\$4,960	\$3,062	334,212	2,316	\$2,575	\$2,506	1.1204
Vermont	52,236	\$1,317	\$633	108,708	617	\$802	\$813	1.2093
Virginia	746,686	\$19,399	\$12,167	1,190,517	7,294	\$8,778	\$8,780	1.2672
Washington	518,562	\$14,794	\$8,210	934,377	6,069	\$7,616	\$7,830	1.3348
West Virginia	295,011	\$5,643	\$3,248	512,582	1,802	\$3,037	\$3,068	1.2939
Wisconsin	579,830	\$13,915	\$7,803	1,034,044	5,441	\$7,964	\$7,918	1.1779
Wyoming	49,201	\$969	\$539	88,341	499	\$597	\$611	1.0879
New England	1,580,396	\$45,521	\$25,243	2,849,893	14,144	\$22,582	\$24,763	1.2678
United States	34,478,280	\$961,149	\$622,963	53,195,353	288,369	\$407,293	\$416,591	1.2228

<sup>1</sup> Source: Hospital Statistics, 2004 Ed., American Hospital Association

<sup>2</sup> Source: Almanac of Hospital Financial and Operating Indicators, 2004 Ed., Ingenix; 2001 data used for: Maine, Massachusetts, New Hampshire, North Carolina, Rhode Island, and Vermont